Association between Hospitalization for Crohn’s Disease (CD) or Ulcerative Colitis (UC) and Biologic Drug Adherence

Background

- Biologic therapy for Crohn’s Disease (CD) requires medical claims data, which can be difficult to extract. Investigators have used different strategies and definitions of adherence. The aim of this study is to compare adherence and hospitalization for CD or UC associated with the use of biologic therapy.

Methods

- CD and UC members were defined, respectively, as all continuous members between January 1, 2014, and June 30, 2016, with the diagnosis code and top ten highest claim volume for CD or UC biologic therapy.

- Biologic therapy (BT) use was associated with hospitalization with medication claim data. BT drug costs and pharmacy claim data were used to estimate the absolute reduction of hospitalization rates associated with adherence.

Results

- In four years (July 1, 2014 to June 30, 2018), 1,364 of 6,560 (20.8 percent) members and 8,687 of 87,177 (10 percent) UC members had one or more hospitalizations for CD or UC, respectively.

- Biologic therapy (BT) was associated with a 9.6 percent reduction in CD hospitalization rates among adherent members. However, adherence to BT was not associated with UC hospitalization rates.

Limitations

- The study analyzed only information from administrative claims to determine who has CD or UC. Some study members may have been misclassified, and adherence was evaluated at the individual level, not at the population level.

Conclusions

- This study shows that adherence to biologic therapy is associated with a lower rate of hospitalization for CD compared to UC. Biologic therapy reduces hospitalization rates, but UC hospitalization is an important direct cost to the health care system, and pharmacists and biologic therapy providers need to work together to reduce hospitalization rates for UC.

Table 1. Crohn’s Disease Association Between 12-Month Biologic Therapy (BT) Adherence and Hospitalization

<table>
<thead>
<tr>
<th>Adherence</th>
<th>Hospitalization Rate (per 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>124 (45.2 percent)</td>
</tr>
<tr>
<td>Yes</td>
<td>56 (47.0 percent)</td>
</tr>
</tbody>
</table>

Table 2. Ulcerative Colitis Association Between 12-Month Biologic Therapy (BT) Adherence and Hospitalization

<table>
<thead>
<tr>
<th>Adherence</th>
<th>Hospitalization Rate (per 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>124 (22.3 percent)</td>
</tr>
<tr>
<td>Yes</td>
<td>124 (22.3 percent)</td>
</tr>
</tbody>
</table>

References


$66,000 per CD and $64,000 per UC.

This real-world total cost of care per CD UC hospitalization is an arithmetic direct medical cost burden, and does not account for patient care costs.

- Although, CD and UC 12-month post hospitalization cost (OMIC) was over $50,000 per year, and from this analysis, 1CD or 1UC individuals would avoid an additional $20,000 per year from non-adherent to adherent to prevent one hospitalization, thus reducing substantial biologic drug cost investment to prevent hospitalization.

These findings can be used for managed care clinical program justification and value-based contracting.